

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently amended) A method for selectively controlling supplied power to an ink melt heater for maintaining a desired ink melt rate despite a varying ambient parameter affecting an actual melt rate, comprising:
 - supplying a predetermined amount of power to the ink melt heater intended to cause the desired ink melt rate;
 - detecting an ambient parameter to the ink melt heater with a temperature sensing device comprising one of a thermistor, thermometer, electrical sensor or chemical sensor;
 - determining if the detected ambient parameter will cause a variance in the actual ink melt rate from the desired ink melt rate; and,
 - adjusting supplied power from the predetermined amount to an adjusted amount for realizing the desired ink melt rate including calculating a temperature correction factors calculated to offset the variance and varying the supplied power by the temperature correction factor.
2. (Original) The method as defined in claim 1 wherein detecting the ambient parameter comprises sensing a factor representative of at least one of local environment air temperature or adjacent ink temperature.
3. (Original) The method as defined in claim 2 wherein the sensing of the factor representative of adjacent ink temperature is made prior to a start of a melt duty cycle.
4. (Currently amended) A system for adapting power control to an ink melt heater for changing phase of an ink stick from solid to liquid at a selected melt rate, comprising:
 - a tray for holding a solid phase ink stick and having an open end for egress of liquid phase ink during heating;
 - a heater disposed at the open end to contact the ink stick;

a reservoir disposed near the heater for receiving the liquid phase ink after heating;

a power supply for supplying energy to the heater;

a control circuit for adjusting the supplied energy;

a sensor for sensing a parameter consequential to an ink melt rate comprising a temperature sensor device for detecting a parameter representative of ambient temperature to the system or the ink stick temperature prior to the start of a melt duty cycle and wherein the control circuit adjusts the supplied energy in accordance with a temperature correction factor to compensate for a consequential effect of the sensed parameter.

5. Canceled.

6. (Original) The system as defined in claim 4 wherein the parameter comprises a factor representative of convection losses to the heater during the melt duty cycle.

7. Canceled.

8. (Original) The system as defined in claim 4 wherein the sensor comprises a thermistor associated with the heater.

9. (Original) The system as defined in claim 8 wherein the heater includes a plate having a first portion disposed to engage the solid phase ink stick and a second portion spaced from the ink stick and wherein the thermistor is associated with the second portion.

10. (Currently amended) An assembly for heating a solid ink supply for changing a phase of the supply from solid to liquid at a desired melt rate including:

means for holding the solid ink supply to facilitate the heating and permit communication of the melted ink therefrom;

means for heating the solid ink supply;

a power supply for supplying energy to the heating means;

means for sensing an ambient parameter affecting melt rate of the supply

comprising a temperature sensing device associated with the means for holding; and

a control circuit for adjusting the supplied energy to the heating means in accordance with a temperature correction factor calculated in response to the ambient parameter wherein the adjusted supplied energy will maintain the desired melt rate.

11. (Previously presented) The assembly as claimed in claim 10 wherein the ambient parameter comprises at least one of either local ambient temperature or a starting temperature of the solid phase ink stick prior to a melt cycle.

12. (Original) The assembly as claimed in claim 11 wherein the means for sensing comprises a thermistor associated with the heating means.

13. (Previously presented) The assembly as claimed in claim 12 wherein the control circuit includes a timer for timing elapsed time from completion since the last melt cycle for the purpose of determining if enough time has lapsed to allow the heater to cool to ambient temperature, and the thermistor detects the starting temperature of the ink stick if the elapsed time from completion of the last melt cycle has not expired and detects the local ambient temperature after expiration of the elapsed time from completion of the last melt cycle.

14. (Original) The assembly as defined in claim 13 wherein the heating means includes a plate for engaging the ink stick and the plate includes a fin portion depending therefrom, and wherein the thermistor detects a temperature of the fin portion.

15 (Previously presented) The assembly as claimed in claim 10 wherein the control circuit for adjusting the supplied energy to the heating means includes more than two distinct power settings and an additional off setting.

16. (Previously presented) The method as defined in claim 2 wherein the sensing of the ambient parameter occurs after the cool down cycle has been completed.